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Claims

1.   Method to rate a discrete decoded picture in respect to its quality, **characterized by** calculating a picture quality rating function (PQRF; PQRF-B) on basis of an information about artefacts (ARI; MSDS) within the discrete decoded picture and a coding information (CRI; M_{Quant}) which was used for discrete coding the picture.

2.   Method according to claim 1, **characterized in that** said information about artefacts (ARI) is a criterium of discontinuity (MSDS) and said coding information (CRI) is a scaling factor (M_{Quant}).

3.   Method according to claim 2, **characterized by** retrieving said scaling factor (M_{Quant}) from the discrete decoded picture on basis of a number of bits used for discrete coding the picture.

4.   Method according to claim 2, **characterized by** determining said criterium of discontinuity (MSDS) based on a rating of transitions in-between neighboured blocks of the discrete decoded picture.

5.   Method according to claim 4, **characterized by** rating transitions in-between neighboured blocks dependent on at least one respective main gradient and one respective sub gradient of a transition in-between neighboured blocks.

6.   Method according to claim 4, **characterized by** rating transitions in-between neighboured blocks based on a sum of a squared difference of all respective main gradients and all respective sub gradients of a transition in-between neighboured blocks.

7.   Method according to claim 4, **characterized by** rating transitions in-between neighboured blocks based on a sum of all transitions in-between neighboured blocks.

8.   Method according to claim 2, **characterized by** determining said picture quality rating function (PQRF-B) distinct in respect to horizontal and vertical transitions.

9.   Method according to claim 2, **characterized in that** said picture quality rating function indicates a maximum quality in case the scaling factor (M_{Quant}) indicates a high correlation with the picture.

10.   Method according to claim 2, **characterized in that** said picture quality rating function indicates a maximum quality in case the criterium of discontinuity (MSDS) indicates a small discontinuity.

11.   Method according to claim 2, **characterized in that** said picture quality rating function represents a sum of a first function dependent on the criterium of discontinuity (MSDS) and a second function dependent on the scaling factor (M_{Quant}).

12.   Method according to claim 11, **characterized in that** said first and second functions have the general structure

$$f(x) = k \cdot e^{-x/\gamma} + d$$

with k and γ being scaling factors and d represents an offset.

13.   Method according to claim 12, **characterized in that** said first function is defined by

$$f_1(MSDS) = 100 \cdot e^{-MSDS/1000}$$

and said second function is defined by

$$f_2(M_{Quant}) = 100 \cdot e^{-M_{Quant}/5} .$$

14.   Method according to claim 1, characterized in that said discrete coding/decoding is based on a discrete cosine transform function.

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15.   Use of the method defined in claim 1 to determine a preferred discrete picture decoding and/or post-processing method.

16.   Use of the method defined in claim 1 to determine a preferred discrete picture encoding and/or pre-processing method.

17.   Computer program product comprising computer program means adapted to perform all the steps defined in claim 1 when said program is executed on a computer.